Local 1
Air Traffic Control
Simulation
Alpha 1
Copyright 2000
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User Manual

Introduction

Welcome to the first incarnation of **Local 1**. This is the beginning of a large project that will ultimately bring a very accurate ATC simulation to the gaming community.

You can contact me personally at randall@randallhook.com.

We also have a nice community started where you can discuss issues with using the sim at the Local 1 Club on the web at http://games.groups.yahoo.com/group/local1/.

Alpha Version Limitations

The following is a non-exhaustive list of the current limitations with Local 1 version Alpha 1.

- aircraft turn on a pinpoint instead of a more realistic arc
- no commands available to aircraft in the air (besides "cleared to land" and "contact departure")
- something is wrong with the ground movement algorithm where you will notice on very long taxiways and runways, the aircraft will take a somewhat curved route (and sometimes into the grass) to get to its next turn
- the ground radar line intersections need to be cleaned up
- straight in ILS arrivals and standard, straight out departures are the only options for arriving and departing aircraft
- the ILS algorithm needs work as some of the aircraft will land short of the runway

ATIS

The ATIS window, toggled via the View Menu, displays the current time, wind (not implemented in the Alpha 1 Version), and runways in use.

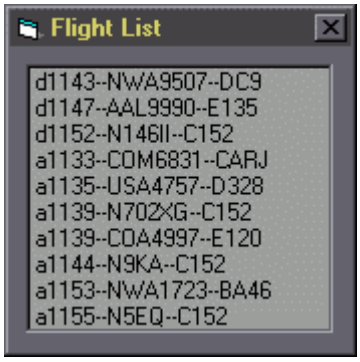
By clicking on the time, you will force the clock to advance one minute. This is purely a tool for play testing. Use this feature when you have several minutes before the next arrival or departure, and would like to cut to the chase.

WARNING: *Use this tool at your own risk. Manually advancing the time too far could cause complete chaos at the airport.*

Flight List

The Flight List, toggled via the View Menu, is used to view all arrivals and departures within thirty minutes of contacting the tower. The information obtained from this window includes:

- time of arrival/departure
- commercial flights - ICAO identifier and flight number
- general aviation flights - tail number
- aircraft designator code

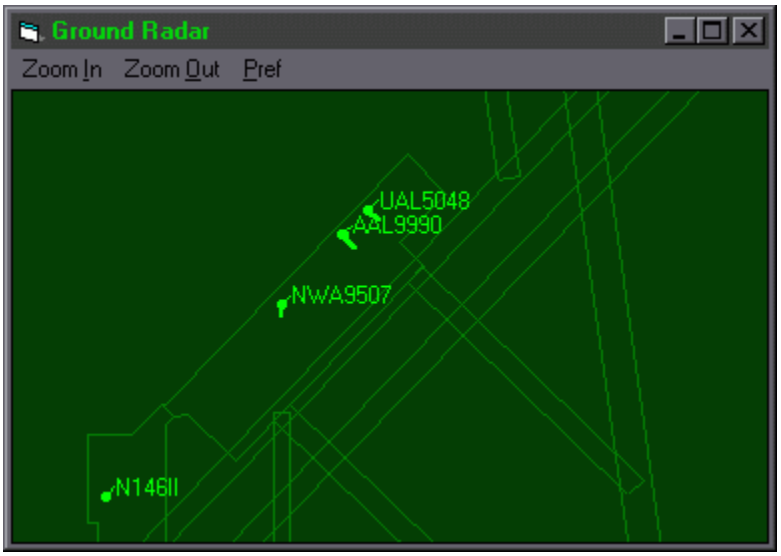


Aircraft will automatically be added and removed from this list as the situation warrants.

Developers Note: The Flight List is a slimmed down version of what will eventually be full blown flight strips, including assigned altitudes, initial headings, SIDs, squawk codes, etc.

Ground Radar

The Ground Radar, toggled via the View Menu, displays the layout of runways, taxiways and ramp areas with aircraft targets superimposed above.



Centering the Radar
Clicking anywhere on the Ground Radar display will center the radar do that location.

Zooming the Radar
Zoom In and Zoom Out on the Ground Radar Menu are clicked once to zoom the amount set in Ground Radar Preferences (see below).

Preferences
Zoom Settings
Set the Zoom Step here. If you set the Zoom Step to 5, each Zoom In and Zoom Out action will increase or decrease the zoom level by 5 feet per pixel.

Show Aircraft
You have two options for displaying aircraft on the Ground Radar.

- **Show All Aircraft**
  Show every aircraft that is currently on the ground at the airport.
- **Show Transponder Aircraft Only**
  Show aircraft only if it has its transponder turned on. Aircraft transponders are turned on from arrival until they shut down at the gate, as well as when they are ready to taxi from the gate. This is

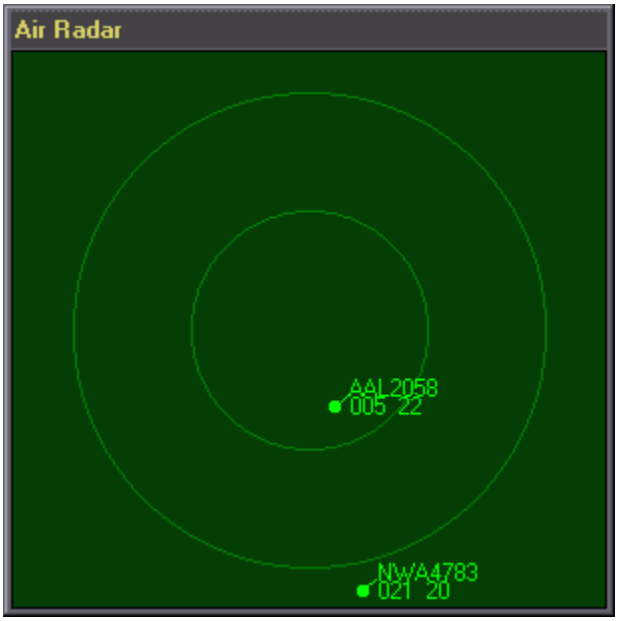
useful for avoiding clutter on the Ground Radar.

Label Taxiways/Runways

Use these options to superimpose taxiway and runway names on the Ground Radar.

Air Radar

The Air Radar, toggled via the View Menu, displays any aircraft within 5nm of the airport, and at least 200 feet in altitude.

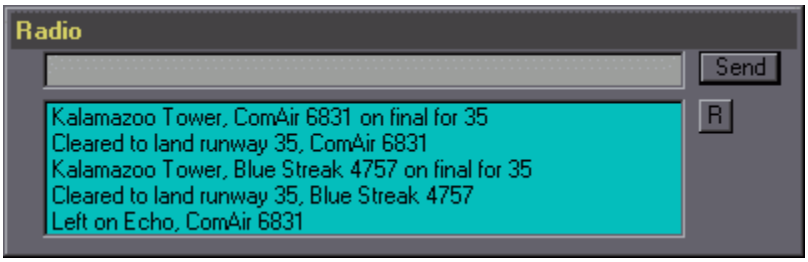


The two rings displayed on the radar represent 2nm and 4nm from the airport.

The aircraft data blocks displayed on the radar show the airline's ICAO code and flight number if it's a commercial flight, or the tail number if it's a general aviation flight. Beneath that information is the current altitude of the aircraft (in hundreds of feet) and the current speed (in knots x 10).

Radio

The Radio is always displayed and is your chief tool for working traffic.


Radio
Send
R
Kalamazoo Tower, ComAir 6831 on final for 35
Cleared to land runway 35, ComAir 6831
Kalamazoo Tower, Blue Streak 4757 on final for 35
Cleared to land runway 35, Blue Streak 4757
Left on Echo, ComAir 6831

Instructions are sent to aircraft by typing in the top text box and clicking the Send Button or pressing ENTER on your keyboard. Any transmissions received from the aircraft will be displayed in the large blue text box. This box will display the last five transmissions received with the most recent message at the bottom.

You communicate with the aircraft by typing in special keyboard commands.

The small "R" button on the Radio is the Record Button. This is for recording Controller Macros.

Radio Communications

Addressing Aircraft
All instructions are preceded by identifying the aircraft you want to talk to. The easiest way to do this is by matching the last few digits of the flight/tail number.

For example, to talk to ComAir 1234, you can simply type 1234 and then your instruction. You can even type just 234, or 34, or 4, provided their are no other aircraft with that specific sequence of digits in their flight/tail number.

To get really specific, you can precede the flight number, by the airline's ICAO identifier and a forward slash. So using the above example, you can also type COM/1234.

Sending Instructions to Aircraft
After identifying the aircraft you wish to talk to, press the spacebar on your keyboard, then issue the command.

Taxi Instructions
Taxi to Runway
xrunway***hs v***route

To instruct an aircraft to taxi to a runway, type an "x" then the name of the runway, then "hs" (for hold short). Then type a space, then a "v" (for via) followed by route instructions with a comma separating each taxiway/runway.

Example
COM/1234 x17hs vc,bn
translates to
"Comair 1234, taxi to runway 17 and hold short via taxiway Charlie then taxiway Bravo North"

Taxi to the Gate
x/g vroute
Taxi to Parking
x/p vroute

To instruct an aircraft to taxi to its gate, type an "x/g" or "x/p". Then type a space, then a "v" (for via) followed by route instructions with a comma separating each taxiway/runway. Technically, there is no difference between "x/g" and "x/p". It is just a matter of correct phraseology to use "taxi to the gate" for airlines and "taxi to parking" for general aviation.

Example
N35Q x/p vf
translates to
"Cessna 35-Quebec, taxi to parking via taxiway Foxtrot"

Continue Taxi
x/c

This command is issued after you have given an aircraft a "hold your position" command or after a "hold short" command issued while the aircraft was enroute to a runway or the gate.

Taxi Left on...
x/l taxiway or runway
Taxi right on...
x/r taxiway or runway

Use these commands when an aircraft has just landed and you want to tell him which turnoff to use.

Example
NWA/55 x/l e
translates to
"Northwest 55, taxi left on taxiway Echo"

Holds
Hold Your Position
hy

After issuing this command, the aircraft will immediately slow to a stop. Use "x/c" to resume taxi.

Hold Short of...
hsrunway or taxiway

While an aircraft is enroute to a runway or the gate, issue this command to have it hold short of the specified runway or taxiway. Use "x/c" to resume taxi.

Example
32S hs5
translates to
"32-Sierra, hold short of runway 5"

Position and Hold

ph

Use this command to have the aircraft line up on the assigned runway and hold.

Takeoffs and Landings
Cleared for Takeoff
ct

You may issue takeoff clearance at any time to an aircraft, as long as you have already told him a runway to hold short of. The aircraft will not hold short now, and will instead line up on the runway and takeoff.

Cleared to Land
clrunway

After an aircraft calls in stating it's on final for a runway, issue this command to give him landing clearance.

Example
UAL/210 cl17
translates to
"United 210, cleared to land runway 17"

Frequency Changes
Contact Departure
nd

Issue this command after an aircraft has taken off and about one mile out from the airport.

Aircraft Reports
Say Parking
spark

Issuing this command to an arriving aircraft will report where the aircraft is headed to park. If it is an airliner, it will report gate number. If it is a general aviation aircraft, it will report the name of its parking area.

Quick Reference

Addressing Aircraft
ICAO Identifier/flight number *or*
complete or partial flight number *or* complete or partial tail number
Sending Instructions to Aircraft
Follow the above addressing method with a "space", then issue the instruction.

Taxi Instructions
Taxi to Runway
xrunway***hs v***route

Taxi to the Gate
x/g vroute
Taxi to Parking
x/p vroute

Continue Taxi
x/c

Taxi Left on...
x/l taxiway or runway
Taxi right on...
x/r taxiway or runway

Holds
Hold Your Position
hy

Hold Short of...
hsrunway or taxiway

Position and Hold
ph

Takeoffs and Landings
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ct

Cleared to Land
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nd

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spark

Controller Macros

Controller Macros allow you to record lengthy and often used instructions and then activate them with a keyboard shortcut.

To record a macro, type the instruction into the radio (without addressing an aircraft) and click the Record Button. The Macros Window will then display, allowing you to select a slot to store the macro. Click the Set Button next to the slot you wish to store the macro.

To activate the macro, address an aircraft on the radio, then press the Control Key on your keyboard along with the slot number of the macro. Your pre-recorded macro will then show up in the radio text bar and you can send the instruction.

Example
Type "x35hs va,bs,b1" into the Radio. Press the Record Button. Press the Set Button next to slot number one in the Macros Window. When an aircraft calls and states it is ready to taxi, address the aircraft then press CTRL-1 on the keyboard.

Options

There are currently two items in the Options Menu.

Pause allows you to immediately pause the simulation. Select Pause again to continue.

Transmission Alert allows you to turn off the audible beep you hear when an aircraft contacts you on the radio.

Playtester Tools

The following tools are meant to be used for testing purposes only. The final version of Local 1 will not include (or at least will not document) them.

Show Flight Schedule
By typing "/fs" into the Radio, the Flights Window will display, showing the entire flight schedule of the airport for the entire day.

Manual Time Advance
By clicking on the time in the ATIS Window, you will force the clock to advance one minute. Use this tool when you have several minutes before the next arrival or departure, and would like to cut to the chase.
WARNING: *Use this tool at your own risk. Manually advancing the time too far could cause complete chaos at the airport.*

Delete Aircraft
By typing "/del" followed by an aircraft identifier, you will delete the aircraft from the system. Use this tool if you discover a bug, and the aircraft is creating havoc at the airport.